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Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

What is claimed is:

Claim 1 (original) A method of establishing a subsequent path across a network to be used to transport traffic carried along an initial path in the event of a failure or signal degradation on said initial path, said method comprising: receiving a digest representative of resources used along said initial path, each of said resources along said initial path known by at least one node on said initial path; establishing said subsequent path, using said digest so that said subsequent path may use resources distinct from said resources used along said initial path.

Claim 2 (original) The method of claim 1, wherein said digest comprises a Bloom filter representative of resources known to each of said nodes.

Claim 3 (currently amended) The method of claim 2, wherein said Bloom filter has a fixed number of bits, and may provide ~~provides~~ an authoritative indicator that a resource is used by said initial path.

Claim 4 (original) The method of claim 3, further comprising adding information representing said resources along said initial path to said Bloom filter at each of said nodes.

Claim 5 (original) The method of claim 1, wherein each of said nodes on said initial path contributes knowledge known thereat to form said digest.

Claim 6 (original) The method of claim 4, wherein said initial path extends from an originating node to a terminating node on said network, and said digest is received at said originating node.

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Claim 7 (original) The method of claim 6, wherein said digest is received as a part of a message confirming establishment of said initial path.

Claim 8 (original) The method of claim 7, wherein said establishing comprises providing said digest to each node along said subsequent path.

Claim 9 (original) A method of forming a digest of information representative of network resources along a path, comprising at each node along said path, adding to said digest, an indicator of resources used by said path and known to that node.

Claim 10 (original) The method of claim 9, wherein said digest is a Bloom filter.

Claim 11 (currently amended) The method of claim 10, wherein said Bloom filter has a fixed number of bits, and may provide ~~provides~~ an authoritative indicator that a resource is used by said initial path.

Claim 12 (original) The method of claim 10, wherein said path extends from an originating node to a terminating node, and wherein said digest is formed as confirmation of establishment of said path is passed from said terminating node to said originating node.

Claim 13 (original) The method of claim 12, wherein said resources comprise physical resources used along said path.

Claim 14 (original) The method of claim 13, wherein said resources comprise at least one of physical port and a physical interconnect used by said path.

Claim 15 (original) A network node along a path, comprising a processor operable to pass an indicator of resources used along said path, known to said network node to an adjacent node on said path.

Claim 16 (original) The network node of claim 15, configured with local knowledge of

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local resources used by paths including said network node.

Claim 17 (original) The node of claim 16, wherein said node is further operable to receive a digest of resources used along said path; add said indicator to said digest; and pass said digest to said adjacent node.

Claim 18 (currently amended) The node of claim 17, wherein said digest comprises a Bloom filter, and said node is operable to modify said Bloom filter to reflect said resources used along said path, known to said network node

Claim 19 (original) The node of claim 18, wherein said indicator is formed as said node acknowledges formation of said path.

Claim 20 (original) The node of claim 19, wherein said path extends from an originating node to a termination node on said network, and said indicator is passed upstream towards said originating node along said path.

Claim 21 (currently amended) A node on a communications network operable to establish a secondary path across said network, said secondary path capable of carrying traffic carried along an initial path, in the event of a fault or signal degradation along said initial path, said node operable to use a digest representative of resources used along said initial path in establishing said secondary path, each of said resources along said initial path known by at least one node on said initial path, so that said secondary subsequent path may be established using resources distinct from said resources used along said initial path.

Claim 22 (original) Computer readable medium storing processor executable instructions that when loaded at a node capable of establishing a path on a network, adapt said node to pass an indicator of resources used along an established path and known to said network node to an adjacent node on said established path.